

REMARKS

Applicants submit this Reply in response to the non-final Office Action mailed on March 18, 2009. Prior to this Amendment, claims 34-66 were pending in this application, of which claims 34-51 were submitted for examination. By this Reply, Applicants have canceled claims 41 and 43 and amended claims 34 and 42. Thus, claims 34-40, 42, and 44-51 are submitted for examination, of which claim 34 is independent. No new matter has been added.

In the Office Action, the Examiner rejected claims 34-38 and 41-48 under 35 U.S.C. § 103(a) as being unpatentable over WO 02/47092 ("Belli") in view of U.S. Pat. No. 6,220,224 ("Matthies"); rejected claim 39 under § 103(a) as being unpatentable over Belli in view of Matthies and further in view of U.S. Pat. No. 3,968,463 ("Boysen"); rejected claim 40 under § 103(a) as being unpatentable over Belli in view of Matthies and further in view of U.S. Pat. No. 4,107,354 ("Wilkenloh"); rejected claim 49 under § 103(a) as being unpatentable over Belli in view of Matthies and further in view of U.S. Pat. No. 6,884,823 ("Pierick"); rejected claim 50 under § 103(a) as being unpatentable over Belli in view of Matthies and further in view of U.S. Pat. No. 4,961,845 ("Dawson"); and rejected claim 51 under § 103(a) as being unpatentable over Belli in view of Matthies and further in view of U.S. Pat. No. 4,877,568 ("Austin").

In this Reply, Applicants have amended independent claim 34 to incorporate subject matter previously recited in dependent claims 41 and 43, which have been canceled. Independent claim 34 now recites, among other things:

A method for the introduction of a liquid into a molten mass under pressure, comprising the steps of . . . bringing said liquid to a predetermined pressure greater than the pressure of said molten mass by means of at least one pump, the pump comprising a

plurality of pumping units; [and] feeding said liquid to a plurality of storage tanks, each storage tank being in fluid communication with at least a pair of the pumping units via at least a pair of respective feeding lines

Support for this amendment can be found in Applicants' specification at least at page 14, lines 9-22 and Figure 1.

Applicants respectfully traverse all pending rejections for at least the reasons discussed below.

Rejections Under 35 U.S.C. § 103(a)

Applying 35 U.S.C. § 103(a), the Examiner rejected claims 34-38 and 41-48 as being unpatentable over Belli in view of Matthies; rejected claim 39 as being unpatentable over Belli in view of Matthies and further in view of Boysen; rejected claim 40 as being unpatentable over Belli in view of Matthies and further in view of Wilkenloh; rejected claim 49 as being unpatentable over Belli in view of Matthies and further in view of Pierick; rejected claim 50 as being unpatentable over Belli in view of Matthies and further in view of Dawson; and rejected claim 51 as being unpatentable over Belli in view of Matthies and further in view of Austin. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See M.P.E.P. § 2142, 8th Ed., Rev. 5 (August 2006). Moreover, "in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed." USPTO Memorandum from Margaret A. Focarino, Deputy Commissioner for Patent Operations, May 3, 2007, page 2.

A *prima facie* case of obviousness has not been established because, among other things, none of Belli, Matthies, Boysen, Wilkenloh, Pierick, Dawson, and Austin, alone or in any combination, teaches or suggests every feature of Applicants' claims. Specifically, none of the references cited by the Examiner teaches or suggests "feeding said liquid to a plurality of storage tanks, each storage tank being in fluid communication with at least a pair of the pumping units via at least a pair of respective feeding lines," as recited in amended independent claim 34.

In rejecting now-canceled claim 43 in the Office Action, the Examiner concedes that neither Belli nor Matthies discloses "feeding the liquid to each storage tank through at least one pair of liquid feeding lines." Office Action at page 4. However, the Examiner maintains that "one of ordinary skill in the art at the time of the invention was made would have found it obvious to include two liquid feeding lines since it has been held that 'mere duplication of parts has no patentable significance unless a new and unexpected result is produced.' (citation omitted)." Id. But independent claim 34, as amended to include subject matter of canceled claims 41 and 43, requires not only the feeding of the storage tanks through at least a pair of feeding lines, but also that each storage tank be in fluid communication with at least a pair of respective pumping units. In this manner, a substantially continuous delivery of fluid and a substantially continuous introduction of liquid into the molten mass can be achieved.

Neither Belli nor Matthies teaches or suggests the claimed features. Further, no other reference cited by the Examiner teaches or suggests, "feeding said liquid to a plurality of storage tanks, each storage tank being in fluid communication with at least a pair of the pumping units via at least a pair of respective feeding lines."

Moreover, the results obtained from the claimed configuration are advantageous and not readily predictable. Applicants' specification states:

In accordance with a preferred embodiment of the method of the invention, the above-mentioned step b) of feeding the liquid is carried out by feeding the liquid to each storage tank of the plurality of storage tanks under pressure through at least one pair of lines for feeding the liquid. In other words, the feeding lines are preferably grouped in pairs and each pair of feeding lines is associated with a respective storage tank. Each storage tank is therefore preferably provided with two inlets in fluid communication with a corresponding pair of feeding lines and with at least one outlet in fluid communication with at least one injector. In such a way, it is advantageously possible to group the pumping units of the pump in pairs, which allows that the two pistons belonging to the grouped pumping units, acting at the same time, feed the storage tanks even when the pressure of the liquid drops. Consequently, there is always a sufficient amount of liquid in the storage tanks for the subsequent injection, which allows to ensure a substantially continuous delivery and a subsequent substantially continuous introduction of liquid into the molten mass.

Specification at page 14, lines 9-22.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of amended independent claim 34 under 35 U.S.C. § 103(a) as being unpatentable over Belli, Matthies, Boysen, Wilkenloh, Pierick, Dawson, and Austin.

Moreover, claims 35-40, 42, and 44-51 depend from independent claim 34 and, thus, contain all the elements and recitations thereof. As a result, dependent claims 35-40, 42, and 44-51 are allowable at least due to their corresponding dependence from independent claim 34.

Claim Scope

It is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and or shown in the drawings. Rather, Applicants believe that they are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

If the Examiner believes that a telephone conversation might advance prosecution of this application, the Examiner is cordially invited to call Applicants' undersigned attorney at (404) 653-6435.

Applicants respectfully submit that the Office Action contains a number of assertions concerning the related art and the claims. Regardless of whether those assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account 06-0916.

Respectfully submitted,

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